ANALYSIS OF THE PROBLEMS OF FOREIGN LOGISTIC SUPPORT TO THE COMMUNIST MAIN FORCE IN SOUTH VIETNAM

S-1570

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NOTE

This report is a working level draft and it has not been approved for publication by the Office of Research and Reports, Central Intelligence Agency.

FOREWORD

The purpose of this report is to trace briefly the history of the infiltration of men and supplies from abroad in support of the Viet Cong in South Vietnam, to examine the requirements of the Viet Cong for logistic support from abroad under various assumptions concerning levels of combat activity and effectiveness, to attempt to quantify the capacity and use of land and sea infiltration routes, and finally to hazard some judgments regarding the capabilities of the Communists for intensifying combat in South Vietnam.

Unfortunately very little information which can be regarded as intelligence is available on this important subject. The conclusions of this report, therefore, must be accepted with caution for they are based largely on judgment rather than on an extensive base of factual information. They are also based on the assumption that the war in South Vietnam will continue at a level short of the all-out involvement and support of North Vietnam.

The basic estimates of the requirements of the Viet Cong for military equipment and supplies have been obtained informally from the staff of the Defense Intelligence Agency; however DIA's estimates for the PAVN now in South Vietnam are substantially higher than the estimates given in this paper. All conclusions should be regarded as preliminary, given the nature of the data.

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Summary

Nearly 40 percent of the Communist main force in South Vietnam estimated to total 69,000 men is equipped with Bloc-origin weapons; the remainder and the 80,000 to 100,000 guerillas are supported entirely from indigenous sources. At the current level of combat, the Communist main force including the 325th PAVN Division battalions require about one ton a day of logistic support from abroad; the quantities of material necessary to re-equip additional Viet Cong (VC) battalions with Bloc-origin weapons would be less than another ton a day.* Since land infiltration routes are able to supply amounts well over the present daily requirements, it is believed the principal use of sea infiltration routes thus far must have been the establishment of stockpiles and supply forces in the coastal and southern areas of South Vietnam which are more easily supplied by sea than by land.

It is estimated that the highest intensity of combat that the main force could sustain considering the weaponry, training, mobility, and general condition of the battlefields of South Vietnam would involve each battalion in combat one day out of every three days. Such an intensity would represent a ten-fold escalation over the current scale of combat estimated at the involvement of each battalion once in every thirty days. The logistic requirements from abroad for such a maximum intensity would amount to 48 tons per day. The intermediate stage between the present

* Fractions of tons have been rounded to nearest whole ton throughout the text of this report, except for tables.

scale of combat and the maximum, a five-fold escalation of the war effort, would require logistic support from abroad of 24 tons per day. In either of these two cases, the requirements for infiltration of supplies by sea would be enormously increased, since the capacity of the land routes is limited to about 6 tons a day.

Because the reequipping and resupply requirements of the Communist main force are so small, considerable escalation of the present scale of combat would be possible without any reliance on seaborne sources of supply or on stockpiles. In addition, the large numbers of native craft controlled by the Communists and the nature of the coastline would permit a significant expansion over present levels of the flow of materials by sea and, therefore, of the scale of combat. However, assuming a considerably expanded effort by US naval forces at coastal patrol, these maritime supply routes would be of increasingly precarious reliability.

I. Introduction

The infiltration of men and military equipment from North Vietnam into South Vietnam continues unabated. Personnel infiltrated after 1958 are estimated to number about 50,000, and include various military officers, technicians, trained troops, and civilian political cadres. Infiltration of equipment and supplies by sea began as early as 1957; infiltration over the land trails from Laos probably began on a small scale as early as 1959. Only small numbers of personnel are believed to have been infiltrated by sea, and these in small groups of 2 to 4 at a time. The bulk of the personnel are estimated to have been infiltrated over the road and trail system from North Vietnam into Laos and thence over the trails

into South Vietnam. On the other hand, relatively small amounts of supplies are estimated to have moved over the land routes, but opportunities for the infiltration of supplies by sea have been substantial.

II. Size of the Communist Force and Estimates of Amount of Logistic Support Required from Abroad

It is estimated that the Viet Cong (VC) now in the Communist main force currently number about 64,000 men. This force is augmented by the confirmed presence in South Vietnam of the 101st Regiment (consisting of 3 battalions) of the North Vietnamese (PAVN) 325th Infantry Division. There are also good indications of the presence of the 18th Regiment and a Headquarters Component of the 325th Division.* We estimate, therefore, for the purpose of computing logistic requirements that including the association of major elements of the 325th Division with the VC the Communist main force now totals some 69,000 men. In addition there are 80,000 to 100,000 guerrillas.

Also, for the purposes of estimating logistic requirements, the VC in the main force are considered to consist of the equivalent of 121 battalions each consisting of 530 men.** The equivalent of 40 of the VC main force battalions is regarded as being equipped with the new Bloc-origin weapons, standard issue in both the North Vietnamese and Chinese Communist armies, an increase since spring 1965 of 19 battalions over the previous estimate of 21 battalions so equipped. Thus about

* COMUSMAC-V accepts the presence of one PAVN regiment, believes the presence of a second regiment probable, and a third possible.

** The early July order of battle for the VC main force lists 10 regimental headquarters, 68 combat battalions, 188 independent companies, 114 independent platoons, and the equivalent of 35 battalions of support.

one-third of the VC in the main force is now equipped with nearly 20,000 relatively new weapons of standard design. The PAVN division is also equipped with these weapons.

The following table shows the estimated weapon mix for each of the 40 VC battalions and each of the battalions in the PAVN division, with the weight per weapon and the total weight of the weapons for each battalion.

Table 1

Weapons for an Infantry Battalion
(530 men)

	Number of Weapons	Pounds Per Weapon	Total Weight Per Battalion (Pounds)
Rifle	102	8.8	897.6
Carbine	313	8.6	2,691.8
LMG/Assault Gun	34	9.48	~~332.32~~ 322.32
MG 12.7 mm	20	83.5	1,670.0
RR 57 mm	10	55.0	550.0
RL 40 mm	5	6.0	30.0
Mortar 60/61 mm	11	44.5	489.5
Mortar 81/82 mm	5	123.0	615.0
Total	500		~~7,276.22~~ 7,266.22 (~~3.7~~ 3.6 tons)

The weight of the weapons required to equip the 40 VC battalions totals about ~~150~~ 144 short tons*. The weapon mix of the 9 PAVN combat battalions attached to the Communist main force and the weights per weapon are estimated to be identical. The weight of the weapons for these 9 battalions totals ~~33~~ 32 tons. The advantages

* Short tons of 2000 pounds are used throughout this memorandum.

of standardization in weaponry are so ~~strong~~ numerous and the increases in fire power are so conspicious that it is estimated that the trend is toward equipping all VC battalions in the main force with weapons of Bloc-origin. If all 121 battalions in the VC main force should be equipped with these weapons the additional weight would amount to ~~300~~ 297 tons. The total weight of weapons needed to equip the entire Communist main force as it is now constituted would, therefore, be about ~~480~~ 470 tons.

A. Logistic Requirements for Current Scale of Combat

The current scale of combat of the Communist main force is estimated to be at the level where each battalion is engaged in combat on the average of less than one day each month.

1. Current Requirements for Present Force: July 1965

It is estimated that the Bloc-equipped VC in the main force (21,200 men) need logistic support from abroad at the level of less than 1 ton per day as tabulated below:

Class of Supplies	40 Battalions (Tons)	VC per battalion	PAVN per Battalion
Class I (Food)	Negl.		
Class II & IV (Except Weapons)	0.088	.0022	.0026
Class II (Weapons Only)	0.020	.0005	.0001
Class III (Petroleum)	Negl.		
Class V (Ammunition)	0.624	.0156	.0187
Total	0.732*	.0183	.0214

The PAVN division now in South Vietnam requires an additional two-tenths

* 0.0183 tons per battalion x 40 battalions = 0.732 tons. Based on data obtained from DIA, but not including food (considered to be obtained locally) and considering only replacement weapons and parts in Class II (Weapons Only).

ton per day from abroad (the equivalent of 0.0219 tons per combat battalion). The slightly larger requirement for the PAVN units is based on the estimate that these forces are dependent to a somewhat larger extent on supplies from abroad than are the 40 VC battalions.* The daily requirement for logistic support from abroad at the present level of combat now represents a total of almost one ton for the VC and associated units of the 325th PAVN division in the Communist main force.

The remaining VC battalion equivalents in the Communist main force (81) not now considered to be equipped with Bloc-origin weapons, and the 80,000 to 100,000 VC guerrillas are estimated to be supported entirely from indigenous sources for weapons, ammunition, and other logistic support. These forces are equipped largely with old French arms, some captured US weapons, and a few Japanese arms. The stockpiles of such weapons and ammunition for them are believed to be substantial, and as larger numbers of men in the main force are equipped with weapons of Bloc-origin, the best of the captured stock is passed on to other units in the VC. Moreover, the VC are able to provide other forms of logistic support for their forces. Some form of VC economic control now extends over vast areas of production and a wide range of commercial transactions.

The VC have established a strong economic base in their almost complete control of charcoal, lumber, salt, and manioc production. They exercise predominant

* Class II and IV (Except Weapons) requirements such as signalling, communications engineering, clothing and other quartermaster supplies are estimated to be higher for the PAVN battalions than for the VC battalions. There are also support units in the division which require supplies from abroad. The daily requirement for a PAVN battalion is, therefore, considered to be 20 percent higher than for a VC battalion. This requirement is considerably lower than the estimate made by DIA, which is equal to 1.32 tons per battalion per day.

influence over extensive areas of rice cultivation, rubber and tea production, the fishing industry, and other agricultural production. The VC have a controlling influence on internal transportation and have organized their own foreign trade and internal transport operations. Clandestine economic activities extend into Saigon and probably externally into Hong Kong, Cambodia, Laos, and France.

2. Requirements July 1964 - June 1965

Up to the spring of 1965, it is estimated that the Communist main force required supplies from abroad amounting to an average of less than one ton per day.* In addition, it would have been prudent for the Communists to have built up a stockpile of weapons, ammunition and supplies from abroad for the force as it is presently constituted. Table 2** has been prepared to illustrate the tonnages involved in stockpiling for the present force at the current scale of combat. If a 90-day stockpile for 40 VC battalions and the PAVN division has been established over the past year, if the weapons for the 19 VC battalions recently equipped with Bloc-origin weapons were also brought in, and assuming that the 9 PAVN battalions carried in their own arms during this period, the total equipment from abroad would amount to an average of less than one ton daily for one year.*** This amount with the less than one ton**** required daily by 21 battalions of the VC main force would total

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* Based on an estimate that about 21 VC battalion equivalents were equipped with Bloc-origin weapons. (21 x 0.0183 = 0.3843).

** Page 25, below.

*** Computed as follows: Weight of new weapons for the 19 VC battalions of ~~70~~ 68 tons, plus 90 day stockpile for 40 VC battalions and the PAVN division of 83.6 tons = ~~153.6~~ tons divided by 365 = 0.42 tons per day.

**** 0.0183 tons per battalion per day x 21 battalions = 0.3843 tons per day.

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almost one ton per day.

3. Requirements for Equipping All VC Main Force Battalions with New Weapons

If all 121 VC battalions in the main force were to be equipped with the new family of weapons within one year (which would mean equipping another 81 battalions), the present daily resupply requirements for weapons and ammunition from abroad for the VC would then be tripled and the daily resupply requirement one year hence would total over 2 tons.* Assuming no further augmentation by PAVN forces the total daily resupply requirement would then amount to about 2 tons. The building up of a 90-day stockpile of arms and ammunition for the entire main force while re-equipping 81 battalions would increase the daily tonnage required during the year by about one ton.** To accomplish the objective of this assumption, therefore, about 2 tons on the average would have to be infiltrated daily for a period of a year.

4. Requirement for An Additional PAVN Division

If an additional PAVN Division is infiltrated during the next 12 months for service with the Communist main force, the daily resupply requirements will increase by about one ton per day when it goes into combat. The weight of the weapons for the division would not be large (only ~~33~~ 32 tons) and it is assumed the weapons would be carried by the infiltrating personnel, but the additional tonnage required to provide a 90-day stockpile would amount to 18 tons. The additional

* Computed as follows: 0.0183 x 121 = 2.21

** Computed as follows: 90 x 2.4 = 216.0 for stockpile plus ~~3.7~~ 3.6 tons of arms for 81 battalions = ~~299.7~~; ~~216.0 + 299.7 = 516.3~~ 508.2 + 365 = 1.4. It is assumed that the new PAVN division carries in its own arms.

291.6

average daily tonnage required during the next 12 months would be very small.* Therefore, if the Communists were to decide to equip all VC battalions in the main force with the new family of weapons and if the stockpile for the main force were to be further augmented by supplies for one additional PAVN division during the next 12 months, an average of 2 tons per day will have to be imported.

When the VC battalions have been entirely reequipped with arms and an additional PAVN division is placed in combat, the daily resupply requirement will have mounted to 3 tons.

5. Summary of Logistic Requirements for Current Scale of Combat

The following tabulation summarizes the various conditions discussed above:

LOGISTIC REQUIREMENTS	Average Tons Per Day
July 1964 - June 1965	Less than 1
Current Requirements - July 1965	Less than 1
July 1965 - June 1966 (To maintain current requirements and undertake requirement of all VC Main Force Battalions and build up a 90-day stockpile for 121 VC battalions and 1 PAVN division, assuming no previous stockpiles.)	2
July 1966 (All VC Main Force Battalions are equipped with new weapons and only 1 PAVN division is in action)	2
July 1965 - June 1966 (To maintain current requirements, undertake reequipment of all VC Main Force Battalions, and infiltration of an additional PAVN division and add to stockpile enough supplies for additional PAVN division.)	2
July 1966 (All VC Main Force Battalions are reequipped and an additional PAVN division is in combat.)	3

* Computed as follows: 0.197 x 90 = 17.73 ÷ 365 = 0.048.

B. Logistic Requirements for An Escalated Scale of Combat

Two stages in the escalation of combat by the Communist main force have been considered for the purposes of estimating logistic requirements from abroad, and for illustrating further the logistic problems of the Communists in South Vietnam. The first stage would be an intermediate condition wherein the intensity of combat would be over 5 times the current scale of combat, and each battalion in the main force on the average would engage in combat one day in about every 6 days. The second stage would be a maximum condition wherein the intensity of combat would be over 10 times the current scale of combat, and each battalion in the main force on the average would engage in combat one day in every three days.*

1. Logistic Requirements for First Stage - Intermediate Escalation

(a) Daily Requirements for Present Force

The logistic requirements from abroad for the VC in the main force as presently constituted if each battalion is engaged in combat one day in about every 6 would be approximately 19 tons per day as shown in the following tabulation:

Class of Supplies	40 Battalions (Tons)
Class I (Food)	Negl.
Class II & IV (Except Weapons)	1.115
Class II (Weapons Only)	0.207
Class III (Petroleum)	Negl.
Class V (Ammunition)	17.752
Total	19.074

* In conventional warfare terms this condition is defined as light combat. It represents the best estimate of the highest intensity of combat that the main force could sustain, considering the weaponry, training, mobility and general conditions of the battle fields which exist in South Vietnam.

In addition it is estimated the PAVN division would require 5 tons a day, so the total daily resupply requirements under conditions of an intermediate level of combat for the Communist forces presently believed to be in SVN would be 24 tons, 27 times the current combat requirement.

(b) Logistic Requirements for Build-up to First Stage and Maintaining Present Force at Current Scale of Combat

The tonnages involved in stockpiling for intermediate escalation of combat are relatively large, as shown in Table 3*. If the Communist forces as presently constituted should wish to obtain a 90-day stockpile prior to engaging in this higher level of combat, they would need a stockpile of 2,173 tons.** This tonnage, if acquired over a period of one year, would mean an additional requirement for supplies of 6 tons per day. If such a stockpile is not now available, and if the Communists wished to acquire one over the next 12 months, they would need a system capable of delivering 7 tons a day (1 ton a day for forces at current level of combat, and 6 tons a day to build a 90-day stockpile in one year) roughly the capacity of the recently existing land routes. If delivery of the 90-day stockpile is desired during a shorter period than one year, the tonnages required for delivery daily would increase rapidly.

(c) Logistic Requirements for Build-up to First Stage with Addition of One PAVN Division and Maintaining Present Force at Current Scale of Combat

The Communists may wish to augment their present force with an

* Page 26, below.
** 24.14 tons x 90 days = 2,173 tons.

additional PAVN division prior to engaging in an intermediate escalation of combat. Under these circumstances, the build-up of a stockpile for 90 days would amount to 2,635 tons.* If the stockpiling took place over a period of one year prior to the arrival of the additional PAVN division, deliveries for stockpiling** and daily needs would amount to 8 tons a day.***

(d) Logistic Requirements for Present Forces and An Additional PAVN Division Under Intermediate Escalation of Combat

The Communist main force of 40 VC battalions and one PAVN division augmented by an additional PAVN division would require about 29 tons of military supplies daily under conditions of intermediate escalation of combat.****

2. Logistic Requirements for Second Stage - Maximum Escalation

(a) Daily Requirements for Present Force

The daily requirements from abroad for the VC in the main force as presently constituted if each battalion is engaged in combat one day in 3 would be 38 tons per day as shown in the following tabulation:

Class of Supplies	40 Battalions (Tons)
Class I (Food)	Negl.
Class II & IV (Except Weapons)	2.231
Class IV (Weapons Only)	0.413
Class III (Petroleum)	Negl.
Class V (Ammunition)	35.504
Total	38.148

* Computed as follows: Current VC and PAVN forces would require 24.14 tons a day, and the additional PAVN division another 5.14 tons a day. 24.14 + 5.14 = 29.28 for 90 days = 2,635 tons.
** Assumes no previous stockpiles for any forces.
*** 2,635 tons ÷ 365 days = 7.21 tons a day, plus 0.929 tons a day for the VC and PAVN forces currently in SVN = 8.13 tons a day.
**** Computed as follows: Current Bloc-equipped VC and PAVN forces would require (19 + 5.14=) 24.14 tons a day and an additional PAVN division another 5.14 tons, a total of 29.28 tons a day.

In addition, the PAVN Division would require 10 tons per day so that the daily resupply requirement under light combat conditions would total 48 tons, 51 times the current daily combat requirement.

(b) Logistic Requirements for Build-up to Second Stage and Maintaining Present Force at Current Scale of Combat

The tonnages involved in stockpiling for maximum combat conditions are also relatively large. Table 4* has been prepared to illustrate the tonnages involved in stockpiling for a condition of maximum combat. If the Communist main force as presently constituted should seek to procure a 90-day stockpile prior to engaging in this stage of combat it would have to procure or have acquired about 4,346 tons of military supplies. This tonnage would represent the receipt of an average of about 12 tons per day for a period of one year. If stocks in this magnitude are not currently available, and if the Communists should wish to acquire them during the next 12 months, they would have to have a logistic system capable of delivering 13 tons per day (1 ton per day for current combat needs and 12 tons to establish a 90-day stockpile in one year). If the stockpile is desired in a shorter period the daily tonnages mount rapidly.

(c) Logistic Requirements for Build-up to Second Stage with Addition of One PAVN Division and Maintaining Present Force at Current Scale of Combat

The Communists might intend to augment their main forces with an additional PAVN division prior to engaging in a condition of maximum combat. In this event the stockpile for 90 days would amount to about 5,272 tons**, and the

* Page 27, below.
** 4,346 tons + 926 tons = 5,272 tons. This assumes no existing stockpiles.

daily requirement for supplies for the current scale of combat (1 ton) plus a build-up for maximum escalation would amount to about 15 tons.*

(d) Logistic Requirements for Present Forces and An Additional PAVN Division Under Maximum Escalation of Combat

The Communist main force augmented by an additional PAVN division would require about 59 tons of military supplies daily under conditions of maximum escalation of combat.**

3. Summary of Logistic Requirements for Escalation of the Current Scale of Combat

The following tabulation summarizes the various conditions discussed above:

LOGISTIC REQUIREMENTS	Average Tons Per Day
Intermediate Escalation:	
Combat with Present Forces	24
Build-up for Combat Within One Year	7
Build-up for Combat Within One Year and Addition of One PAVN Division	8
Combat with Present Forces and One Additional PAVN Division	29
Maximum Escalation:	
Combat with Present Forces	48
Build-up for Combat Within One Year	13
Build-up for Combat Within One Year and Addition of One PAVN Division	15
Combat with Present Forces and One Additional PAVN Division	59

* Computed as follows: Stockpile for 90 days of 5,272 tons ÷ 365 = 14.4 plus current requirements of 0.929 tons = 15.36 tons.
** Computed as follows: 40 VC battalions will require 38 tons and 2 PAVN divisions 20.58 tons, a total of 58.58 tons a day.

III. Capability and Use of Various Systems for Infiltrating Logistic Support

A. Land Routes

Two major land routes from North Vietnam into Laos serve as a means of infiltrating logistic support and both end in a series of trails over which the supplies must be carried from Laos into South Vietnam. The first involves a truck movement south from Vinh to the area of the Demilitarized Zone near the Laotian border. From there the supplies are portered to Ban Dong in Laos where an all-weather truck road (route 92) extends south and east to the area near the border of South Vietnam. From the southern part of route 92 supplies are moved farther south within Laos by native craft and by manpower and eventually over trails into South Vietnam by porters. These trails pass through rugged terrain and dense vegetation making them almost invisible from the air. This is the oldest of the land infiltration routes and it has been under the control of the 70th Transportation Group of the Peoples Army of Vietnam (PAVN) since the route was first marked out in 1959. Initially it was used primarily for the infiltration of men and prior to the extension and upgrading of route 92 it was estimated that 2,000 porters could move no more than 1 ton per day into South Vietnam. Now, with the use of trucks on route 92, the porters could be moving at least 2 tons per day to the start of route 92 at Ban Dong from where they are trucked south.

The second and higher capacity route is a dry season route only. It is used from about mid-December through May or June, to supply the Communist forces in the southern part of Laos and the VC in South Vietnam. During the dry season

trucks move from North Vietnam down route 1A to route 15*, follow routes 15 and 12 into Laos through Mu Gia Pass, and proceed south on route 23** to supply dumps located along routes 23 and 9, and continue farther south on route 92.

Prior to the completion of route 23 in 1962 supplies for the Communist forces in southern Laos were moved by air. During January-June 1963 many large truck convoys were observed moving south on route 23. Although most of these trucks carried troops and supplies for the southern part of Laos, some of the supplies may have been portered over the trails into the northern provinces of South Vietnam. Again in 1964 the convoys moved during the dry season. Observation by road-watch teams was so incomplete in both years, however, that it is impossible to estimate with confidence the volume of supplies moved into the area in excess of the requirements of the area.

Toward the end of the 1965 dry season, bombing and armed reconnaissance missions had reduced the estimated capacity of this route from 400 tons each way per day to 100 tons. As a result of considerably improved reporting during the 1965 dry season, however, it is possible to estimate that the level of traffic moving south on route 23 averaged 17 trucks per day, or only about half of the post air attack capacity. These 17 trucks are estimated to have moved 45 tons of military supplies daily into the area. The some 8,000-odd Communist troops in the southern part of Laos needed 30 of these 45 tons received during the dry season (15 tons for daily consumption and 15 tons for stockpiling in anticipation of the halt in traffic during the rainy season). Therefore there could have been an excess of 15

* The number of this route in North Vietnam was formerly called 12 or 15/12.
** In this report the only section of route 23 being discussed is that portion between 12 and 9.

tons per day delivered to the area during the 1965 dry season. On an average annual basis this tonnage would represent slightly more than 7 tons per day.

Thus over the two major land routes a total of 9 tons is probably currently available to be infiltrated into South Vietnam. The net amount delivered, however, would probably be only of the order of 6 tons, because the estimated 3,600 porters employed in the final stage of the supply movement and the infiltrators would consume about 3 tons of rice per day.* **

The VC also obtain supplies, mainly food and small amounts of military supplies, from Cambodia by using porters and smugglers who mingle with normal village traffic to cross the lightly patrolled border. In addition to the water infiltration route along the Mekong River (which is included as part of the next section on supply lines by sea), evidence indicates that trails are used to cross the border principally into Thy Ninh Province, which is for the most part controlled by the VC. Interrogation reports indicate that porters have made regular trips into Cambodia in this area to receive supplies that have been transported by ox cart to the supply point.

The use of these routes to move military supplies through Cambodia probably has been fairly low, however, probably due to the fact that the Cambodian government

* The food requirement for 3,600 porters is estimated to be 2 tons per day, assuming that each one consumes the equivalent of 1½ lbs of rice daily (3,600 X 1.5 lb = 5,400 lbs divided by 2,000 lbs = 2.7 tons), rice consumed by infiltrators probably brings the total to about 3 tons per day. Factors used to estimate that 3,600 porters could deliver about 6 tons per day into South Vietnam are as follows: 1) distance over the various trails that cross the border probably average about 90 miles; 2) each porter walks a total of 15 miles per day carrying 40 lbs for half this distance; 3) the distance is divided into 6 stages in which 2 groups of 300 men each are employed, one group going east and the other going west each day; 4) the 300 men that walk east in the final stage could deliver 12,000 lbs or 6 tons each day.

** There are indications that some of the trails running eastward from route 92 to the South Vietnamese border may be upgraded into dry season roads, thus reducing the distance supplies have to be portered. It is estimated that the estimated 3,600 porters used in the final stage of the supply movement could then deliver 9 tons per day during the dry season.

has not officially acknowledged involvement with the VC. A large movement would be difficult to conceal, and the present movement is probably less than one ton per day.

B. Sea Routes

There is reasonably firm intelligence confirming the fact of infiltration of men and supplies for at least 8 years. None of the intelligence sources, however, has been able to provide sufficient information to form the basis for an estimate of the magnitude of the operation. In addition, sources of information conflict. Based on reports from captured Communists, by far the most numerous landings of supplies from the sea occurred in 1963 in the coastal area south of the 11 Parallel. Landings were also reported to have been at a high level in 1964 in the same general area.

25X1

25X1

From study of all available source material one must conclude that the system for sea infiltration is well organized and that discipline and security in the organization are well maintained.

25X1

as many as 5 organizations in North Vietnam are involved with sea infiltration. Although reasonably firm evidence indicates that about 200 small native craft,

25X1

25X1

25X1 [redacted] are involved in sea infiltration, only 100 are believed to be directly involved in sea infiltration at any one time.* If 100 craft of this type ply between North Vietnam and VC controlled areas of South Vietnam it is estimated thay they could deliver a total of 75 tons of supplies daily.** Captured VC personnel have revealed that there is an organization under which native craft from South Vietnam sail to North Vietnam and return with arms. Moreover, a [redacted] 25X1

25X1 [redacted] said that five 60-ton capacity diesel trawler-type ships belonging to North Vietnam had made 20 trips to South Vietnam delivering military supplies from 1960 through October 1964. One can calculate that if 10 additional ship loads have been delivered during the past 8 months a total of 1,800 tons may have been infiltrated by this operation.

Finally, large craft including merchant ships are suspected of having off-loaded supplies for the VC along the coast of South Vietnam and en route to 25X1 or from Sihanoukville and Phnom Penh, Cambodia. [redacted]

25X1 [redacted]

* There are 5,000 to 8,000 coastal junks in North Vietnam and many of the small native craft in South Vietnam.

** Based on the assumption that each craft carries 30 tons, makes one trip in each month for 9 months of each year. High seas which occur during the final quarter of the calendar year make it difficult for small craft to be used for infiltration during that period.

The compact nature of arms and ammunition makes them easy to conceal and to carry substantial quantities in small craft, to off-load large amounts from merchant ships standing off-shore into sampans and junks, and to transship such items from the territorial waters of Cambodia. The interception of sea infiltration takes on staggering proportions when one considers the 50,000 craft that ply along the 1,500 mile coastline of South Vietnam and the rivers and canals. Naval patrols have inspected craft (checked and/or boarded) as follows:

Year	Number of Craft Inspected	
	Total for Period	Average per Day
1963	136,000	370
1964	200,000*	550
1965 (13 Apr-6 July)	37,704**	444

According to this tabulation, the number of craft inspected daily in 1963 and 1964 has never been over 1 percent of the total in the area, and even during the period for 1965 the number declined considerably compared with the daily rate reported for the preceding year. There are also reports that the RVN fleet concerned with inspection has not moved farther than about 12 miles from shore during the day and 6 miles at night. Most craft concerned with sea infiltration appear to have used a "distant-shore" route, ranging from 50 to 100 miles from the coast, and closing in to land at dusk. The recent increase in patrolling by US and RVN naval ships and increased aerial reconnaissance should make it extremely difficult for the larger merchant ships to participate directly in sea infiltration. US Navy

* Number suspected of being inflated by RVN.
** Subject to confirmation.

participation in surface to air offshore surveillance to counteract sea infiltration was initiated by the Seventh Fleet in March 1965 with 11 ships and 10 aircraft. The daily average in operation at present is reported to be 17 US ships and 15 Sea Force Craft and 212 Coastal Force Junks of South Vietnam. Seventeen Coast Guard steel-hulled gunboats were to be assigned to aid in surveillance starting in mid-July 1965. In addition, US aircraft attack and harass coastal shipping north of the 17th Parallel.

The dearth of intelligence on cargoes infiltrated by sea makes it impossible to quantify the tonnages received. The capability has been and continues to be great, especially in small-craft, although the requirements in the past for logistic support have not been large. There would, nevertheless, have been many opportunities to stockpile supplies through sea infiltration and the probability that large stockpiles exist can not be discounted. There are enough denied VC-base areas along the coast to conceal substantial stockpiles, and Bloc-origin weapons have been captured in quantity.

IV. Relationship of Logistic Requirements to Capabilities and Use of the Infiltration Routes

From the foregoing analysis of logistic requirements, and capabilities and use of the land and sea infiltration routes, the lack of any necessity for using sea infiltration is conspicuous. Significantly increased quantities of materials were moved over land routes during the 1965 dry season in spite of the air attacks, and these routes are estimated to be capable of supplying the entire current

daily needs of the Communists from abroad (one ton needed; six tons possible by land). In fact, the present scale of combat could be doubled (one man in combat every 15 days) with only negligible reliance on sea infiltration routes. That they could do this, but have still actually used sea infiltration can probably be explained by the fact that it was much easier to supply their units in coastal and southern areas of SVN by boat than depend on large numbers of porters carrying supplies over trails from the northern part of SVN.

Land infiltration supplies is incapable of accomplishing all of the potential reinforcement and combat escalation objectives considered in Part II, above. To achieve such objectives the VC would have to draw on stocks which may exist in quantities large enough to reequip all VC battalions in the main force and/or to escalate the scale of combat. Such stockpiles in all probability have been and continue to be sustained through the infiltration of military supplies from abroad by both land and sea.

Any sizeable escalation of combat would require increasing use of sea infiltration routes. The only alternative available to the Communists during the rainy season would be to expand significantly the use of porters moving supplies to and from the all-weather truck route (route 92) in Laos. The numbers of porters required would be so large, however, as to present tremendous recruitment and organizational problems. This plan would also concentrate large numbers of men in places where there would be a high probability of their being located by US or South Vietnamese aerial reconnaissance and thus present suitable air targets.

In view of the opportunities for sea infiltration in the past, it would be prudent to anticipate that the Communists may have sufficient Bloc-origin military supplies stockpiled for at least 90 days at the current scale of combat and possibly to support escalation of the scale of combat to an intermediate condition for a period of at least 90 days (wherein the intensity would be over 5 times the current scale). The expenditure of ammunition and other military supplies at this level of combat intensity would be relatively great (24 tons per day).

The stockpiles of military supplies needed and the daily resupply required for the escalation of the scale of combat to the maximum condition wherein the intensity would be over 10 times the current scale of combat are extremely large in relation to current requirements, and the best judgments on the size of stockpiles. For these reasons, the Communists are not believed able to sustain or even undertake briefly, combat at this scale of intensity, short of an all-out invasion of South Vietnam by the army of North Vietnam accompanied by substantial engineering support to reconstruct and build roads for supply purposes.

The number of ships and small craft that would have to be employed in the infiltration of military supplies and equipment by sea to increase the fire power of the Communist main force, and to supply adequately a moderate augmentation of this force, would not be large in number. The number would also probably be so small that the Communists' ships may continue to be reasonably successful in avoiding detection by naval patrols. In the event that the Communists should plan to escalate

combat to the intermediate scale for a sustained period, however, the number of small craft and ships that would have to be employed on supply movements would increase substantially. If they should plan to escalate combat to the maximum scale, the number of small craft and ships used in sea infiltration would increase even more substantially. Opportunities for their interdiction by naval patrols would increase also.

In order to augment adequately the capacity of the overland supply routes, an all-weather road to South Vietnam could be started at the end of the rainy season in December, by improving routes 23 and 9 in Laos and extending route 92 into South Vietnam. The odds are against such a move, however, as long as we maintain air supremacy over Indochina. Short of full involvement on the part of North Vietnam, therefore, it appears the Communists in South Vietnam will continue to be dependent on sea infiltration for military supplies for improved combat effectiveness in the main force. Personnel, however, will continue to infiltrate principally over the more secure land routes where the trip also further conditions men for life as insurgents.

25X1

Table 2

Build-up of Supplies For Present Level of Combat of VC Main Force*

No. of Days Stockpile to Last	Size of Stockpile Required (Tons)	Number of Days over which Stockpile to be Built-up				
		365	180	90	60	30
		Supplies Required Daily to Build Stockpile (Tons per Day)				
365	339	0.9	1.9	3.8	5.6	11.3
180	167	0.5	0.9	1.9	2.8	5.6
90	84	0.2	0.5	0.9	1.4	2.8
60	56	0.2	0.3	0.6	0.9	1.9
30	28	0.1	0.2	0.3	0.5	0.9

* For Communist main force units currently estimated to be in South Vietnam.

25X1

Table 3

Build-up of Supplies for Conditions of an Intermediate Level of Combat*

No. of Days Stockpile to Last	Size of Stockpile Required (Tons)	Number of Days over which Stockpile to be Built-up				
		365	180	90	60	30
		Supplies Required Daily to Build Stockpile (Tons per Day)				
365	8,811	24.1	48.9	97.9	146.8	293.7
180	4,345	11.9	24.1	48.3	72.4	144.8
90	2,173	6.0	12.1	24.1	36.2	72.4
60	1,448	4.0	8.0	16.1	24.1	48.2
30	724	2.0	4.0	8.0	12.1	24.1

* For Communist main force units currently estimated to be in South Vietnam.

25X1

Table 4

Build-up of Supplies for Conditions of Light Combat*

No. of Days Stockpile to Last	Size of Stockpile Required (Tons)	Number of Days over which Stockpile to be Built-up				
		365	180	90	60	30
		Supplies Required Daily to Build Stockpile (Tons per Day)				
365	17,626	48.3	97.9	195.8	293.8	587.5
180	8,692	23.8	48.3	96.6	144.9	289.7
90	4,346	11.9	24.1	48.3	72.4	144.9
60	2,897	7.9	16.1	32.2	48.3	96.6
30	1,449	4.0	8.0	16.1	24.1	48.3

* For Communist main force units currently estimated to be in South Vietnam.

25X1